# Complete Summary

## GUIDELINE TITLE

Surgical treatment of reflux esophagitis.

## BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract. Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract; 2000. 4 p. [4 references]

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Reflux esophagitis with or without hiatal hernia.

### GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Risk Assessment
Treatment

### CLINICAL SPECIALTY

Gastroenterology

### INTENDED USERS

Physicians

## GUIDELINE OBJECTIVE(S)

To guide primary care physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs.

## TARGET POPULATION

Adult patients with reflux esophagitis.

## INTERVENTIONS AND PRACTICES CONSIDERED

Treatment of reflux esophagitis:

1. Lifestyle modifications: Avoidance of certain food and beverages, elevation of head of bed while sleeping, abstinence from smoking and alcohol.
2. Pharmacotherapy: Antacids (such as ranitidine), $H_2$ receptor blockers, proton pump inhibitors; promotility drugs, including cisapride*, metoclopramide, and domperidone.
3. Surgery: Open or laparoscopic fundoplication, repair of hiatal hernia.

*Please note: Janssen Pharmaceutica Inc. has discontinued marketing cisapride (Propulsid) in the United States as of July 14, 2000. The company has stated that it would continue to make the drug available to patients who meet specific clinical eligibility criteria for a limited-access protocol. For more information, please see the Talk Paper published at the U.S. Food and Drug Administration Web site.

## MAJOR OUTCOMES CONSIDERED

- Functional ability of lower esophageal sphincter
- Surgical complications
- Respiratory complications
- Post-operative swallowing
- Length of hospital stay

# METHODOLOGY

## METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

## DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

## NUMBER OF SOURCE DOCUMENTS

Not stated

## METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

## RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

## METHODS USED TO ANALYZE THE EVIDENCE

Review

## DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

## METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

## DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Society for Surgery of the Alimentary Tract (SSAT) guidelines are based on statements and recommendations that were overwhelmingly supported by clinical evidence. Each represents a consensus of opinion and is considered a reasonable plan for a specific clinical condition.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guidelines were reviewed by several committee members and then by the entire committee on several occasions. Each guideline was then sent back to the original author for final comment and reviewed again by the committee. Each guideline was approved by the Board of Trustees of the Society for Surgery of the Alimentary Tract and final comments were reviewed by the committee.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

#### Treatment

Patients with typical gastroesophageal reflux symptoms should initially be managed by lifestyle modifications. Foods and beverages that can weaken the lower esophageal sphincter should be avoided, including chocolate, peppermint, fatty foods, coffee, and alcoholic beverages. Also to be avoided are foods and beverages that can irritate an inflamed esophageal mucosa, such as citrus fruits and juices, tomato products, and pepper. Elevation of the head while sleeping, not lying down immediately after meals, and abstinence from smoking are also helpful.

Medical therapy, including antacids, H-2 receptor blocking drugs, and proton pump inhibitors, is directed at reducing the acid content of refluxed material. Acid inhibition is most effectively achieved with proton pump inhibitors. Promotility drugs (including cisapride*, metoclopramide, and domperidone) are of little benefit in patients with severe reflux symptoms unless they have delayed gastric emptying.

Although medical therapy is highly effective in controlling the signs and symptoms of gastroesophageal reflux, approximately 80% of patients will relapse within three months if therapy is discontinued. However, complete control can often be accomplished by continuous therapy with a proton pump inhibitor.

Surgical procedures are usually very effective in controlling severe gastroesophageal reflux disease. In one study, fundoplication was found to be more effective than a two-year regimen of ranitidine plus metoclopramide. Surgery is indicated for patients who do not respond to medical therapy, have complications of gastroesophageal reflux (such as a stricture), are non-compliant with medical therapy, or are totally dependent upon medical treatment to prevent recurrence of their symptoms. Some patients choose surgery due to the expense of long-term medical therapy and the possible consequences of chronic proton pump inhibitor treatment, including an unconfirmed increased incidence of esophageal cancer.

Fundoplication may be more cost effective than long-term medical therapy and, if successful, increases the patient's perceived quality of life. Surgical approaches include the procedures of Hill, Belsey, Nissen, or Toupet. All incorporate some form of fundoplication which is a wrap of the gastric fundus completely or partially around the gastroesophageal junction. The Belsey procedure is performed through

a thoracotomy and the others are performed using either open abdominal or laparoscopic approaches. Barrett's esophagus (metaplasia) is not an indication for surgery because the evidence is inconclusive that its natural history is altered by successful fundoplication. Surgical procedures are designed to create a functional lower esophageal sphincter and to repair a hiatal hernia if present. The Nissen fundoplication or a modification of this technique is most often used, and involves mobilization and wrapping of the fundus of the stomach around the lower esophagus. Increased pressure in the stomach leads to compression of the lower esophagus, preventing reflux. A large dilator is first placed in the esophagus to prevent excessively tight wrapping.

Fundoplication performed by either the traditional open or laparoscopic technique should be identical, except that access to the esophagus by laparoscopy is through a series of small punctures rather than an upper abdominal incision. The advantages of the open technique include the ability to palpate and a three-dimensional view, while laparoscopy provides a magnified view and is associated with less pain and more rapid recovery.

### Qualifications for Performing Surgery for Gastroesophageal Reflux

The qualifications of a surgeon performing any operative procedure should be based on training (education), experience, and outcomes. At a minimum, laparoscopic or open fundoplication should be performed by surgeons who are certified or eligible for certification by the American Board of Surgery or the Royal College of Physicians and Surgeons of Canada, or their equivalent. When performing laparoscopic fundoplication, it is highly desirable that the surgeon have advanced laparoscopic skills.

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## CLINICAL ALGORITHM(S)

None provided

# EVIDENCE SUPPORTING THE RECOMMENDATIONS

## TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

# BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

## POTENTIAL BENEFITS

Medical therapy: Medical therapy is highly effective in controlling the signs and symptoms of gastroesophageal reflux. Approximately 80% of patients will relapse within three months if therapy is discontinued. Complete control can often be accomplished by continuous therapy with a proton pump inhibitor.

Surgical therapy: Surgical procedures are usually very effective in controlling severe gastroesophageal reflux disease. Limited data suggest that long-term outcome is equivalent after open or laparoscopic procedures, with less than 10% recurrence of reflux symptoms after fundoplication.

### POTENTIAL HARMS

Surgical Risks and Complications:

The most common risks include bleeding or damage to structures such as the spleen, esophagus, or stomach, at a rate of 5% or less, and may occur after either open or laparoscopic techniques. Respiratory complications, such as atelectasis or pneumonia, are less frequent after laparoscopic surgery than after open upper abdominal surgery. Pneumothorax is more likely with the laparoscopic approach and usually occurs on the left side.

Most patients will experience temporary difficulty in swallowing after surgery, especially with solid foods, but nearly all patients are able to swallow normally and eat an unrestricted diet by six weeks after surgery. A feeling of fullness (satiety) is another common but temporary occurrence. Gas-bloat syndrome may also occur after fundoplication. Patients whose fundoplication (i.e., wrap) is tight may have difficulty in expelling the gas by belching, but this usually resolves with time.

Failure to approximate the crura around the esophagus may result in a paraesophageal herniation of the stomach (presenting as chest pain), occasionally requiring urgent operation.

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

These guidelines have been written by the Patient Care Committee of the Society of Surgery of the Alimentary Tract (SSAT). Their goal is to guide PRIMARY CARE physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs and they are based on critical review of the literature and expert opinion. Both of the latter sources of information result in a consensus that is recorded in the form of these Guidelines. The consensus addresses the range of acceptable clinical practice and should not be construed as a standard of care. These Guidelines require periodic revision to ensure that clinicians utilize procedures appropriately but the reader must realize that clinical judgement may justify a course of action outside of the recommendations contained herein.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better
Living with Illness

### IOM DOMAIN

Effectiveness
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract. Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract; 2000. 4 p. [4 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1996 (revised 2000)

### GUIDELINE DEVELOPER(S)

Society for Surgery of the Alimentary Tract, Inc - Medical Specialty Society

### SOURCE(S) OF FUNDING

Society of Surgery of the Alimentary Tract, Inc.

### GUIDELINE COMMITTEE

Patient Care Committee

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Committee Members: Thomas R Gadacz, MD (Chairman); L William Traverso, MD; Gerald M Fried, MD; Bruce Stabile, MD; Barry A Levine, MD.

## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

## GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

## GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the Society for Surgery of the Alimentary Tract, Inc. Web site.

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-0, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-8890.

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.

Electronic copies: Not available at this time.

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-0, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-8890.

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on March 28, 2000. The information was verified by the guideline developer as of May 30, 2000.

## COPYRIGHT STATEMENT

Date Modified: 11/8/2004